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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

Date: DEC 09 1994

Subject: Approval of Aquifer Exemption in Indiana

From: Director, Water Division

ORIGINAL SIGNED BY
KENNETH A. FENNER

To: Valdas V. Adamkus
Regional Administrator

On August 19, 1991, primary enforcement authority (primacy) was delegated to the Indiana Department of Natural Resources (IDNR) for their Class II Underground Injection Control program. The purpose of this memo is to describe a minor change that is being made to the IDNR's approved Class II primacy program, and the approval of an aquifer exemption in Indiana.

The IDNR has requested that Region 5 approve an aquifer exemption for a gas storage field in White County, Indiana. The hydrocarbon storage operation is located in the Wolcott Gas Storage Field, and is operated by Indiana Gas Company, Inc. The field has been operating for nearly 30 years and is, therefore, considered an existing project. This proposed aquifer exemption is for a formation that is not an existing hydrocarbon production operation. The injection wells are used to dispose of brine that is brought to the surface during the recovery of stored hydrocarbons from the overlying Trenton Limestone and underlying St. Peter Sandstone. These formations are, however, in communication based on the migration of gas from the St. Peter upward into the Trenton Limestone.

My staff has reviewed the request, and recommends that the aquifer exemption be approved. The exemption meets the requirements in 40 C.F.R. 144.7, and the aquifer exemption is limited to the area immediately surrounding one injection well in the Wolcott Gas Storage Field. This aquifer is not expected to serve as a source of drinking water due to its depth and because the continued storage and reclamation of natural gas from this formation over the past twenty eight years has caused the formation water to be unusable due to the presence of hydrocarbons.

Further details are included in the attached exemption summary sheet. We recommend that you sign the letter to the Director of the IDNR, approving the incorporation of the aquifer exemption into the approved primacy program. If you would like further information, please contact either Tim Drexler or Diane Doyle at 353-4367 or 886-2929, respectively.

Attachment

bcc: Tim Drexler, WD-17J

**AQUIFER EXEMPTION
SUMMARY SHEET**

APPLICANT: Indiana Gas Company, c/o Keith Keppel, 1630 N.
Meridian Street, Indianapolis, IN 46202

HEARING DATE: N/A

I.D. NUMBER: IDNR #33652 (former number)

EXEMPTION DESCRIPTION (Township, Range Section, Quarter
Sections and affected areas):

The area within a circle of one-quarter mile radius centered on
the proposed injection well located at: 60 fsl, 130 fwl, SE/NE
of Section 11, T26N, R6W, White Co., IN

FIELD: Wolcott Gas Storage Field

AQUIFER TO BE EXEMPTED: Black River Limestone

JUSTIFICATION FOR EXEMPTION:

Aquifer is not a source of drinking water and will not serve as a
source of drinking water in the future because it:

- () Has a TDS level above 3,000 mg/l and is not reasonably
expected to serve as a source of drinking water
- () Is producing or is capable of producing hydrocarbons
- (xx) Is too deep or too remote
- () Is above a Class III area subject to subsidence
- (xx) Is too contaminated (name contaminant (s)): Natural Gas
- () Other

PURPOSE OF INJECTION: Dispose of produced brine from the Trenton
Limestone associated with gas production from Wolcott Gas Storage
Field.

INJECTED FLUID QUALITY: 1800 mg/l TDS

INJECTION FLUID SOURCE: Trenton/Black River Limestone Formation

FORMATION WATER QUALITY: 1800 mg/l TDS

APPLICANT: Indiana Gas Company
I.D. NUMBER: IDNR #33652 (former number)

OIL OR MINERAL PRODUCTION HISTORY: Wolcott gas storage field surrounds the proposed injection well. Indiana Gas Company began using the Wolcott field for storage in 1967.

ACTIVE INJECTION WELLS INJECTING INTO SAME FORMATION

<u>Field</u>	<u>Location</u>	<u>Inj Interval</u>	<u>Inj Source</u>	<u>Total Depth</u>
Wolcott	11-26N-6W	Trenton Ls	Trenton Ls	1433 feet

WATER USE IN AREA:

Groundwater comes from sand and gravel lenses that are less than 100 feet deep. There are no water wells within the area proposed for exemption.

REMARKS:

The St. Peter Sandstone, which underlies the Black River and Trenton Limestones, was at one time used for gas storage. However, due to high water production and communication upward from the St. Peter to the Trenton, this zone has not been utilized for the past 12 years. The communication of natural gas supports the operator's statement that fluid quality in the Black River and Trenton formations is similar.